

Revisions to the Delaware Sediment & Stormwater Regulations

Training Session 1: Regulation Overview

Effective Date

January 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	



Grandfathering

- Interim Guidance Document
 - Updated March 2013

Drainage & Stormwater Section



Revisions to Delaware's Sediment and Stormwater Regulations

FINAL
[5101 Sediment and Stormwater Regulations](#)
Date of Issuance: July 18, 2013
Effective Date: January 1, 2014

 [Interim Guidance Policy Technical Document](#)

More complete documentation of the regulatory revision process can be found in the information and linked documents below.

[Regulatory Advisory Committee \(RAC\)](#)
The Regulatory Advisory Committee (RAC) was formed to help guide the revisions to the Delaware Sediment and Stormwater Regulations.

[Proposed 5101 Sediment and Stormwater Regulations](#)
Public Hearing: Tuesday, April 23, 2013, 6 p.m.
DNREC Richardson & Robbins Building Auditorium
89 Kings Highway
Dover, DE 19901

Upcoming RAC meetings: None scheduled at this time

[Find details on all DNREC meeting locations and times](#)

RAC meeting summaries to date:

- February 25, 2013 [Agenda, Presentation](#)
- January 10, 2012 [Agenda, Meeting Notes, Presentation](#)

March 1, 2012 Public Hearing Record Documents

- [Proposed Regulations: 5101 Sediment and Stormwater Regulations](#)
- Delaware Sediment and Stormwater Program Technical Document - REVISED March 2013 (see document link above)
- [Public Hearing Presentation](#)
- [Start Action Notice SAN #2006-16](#)

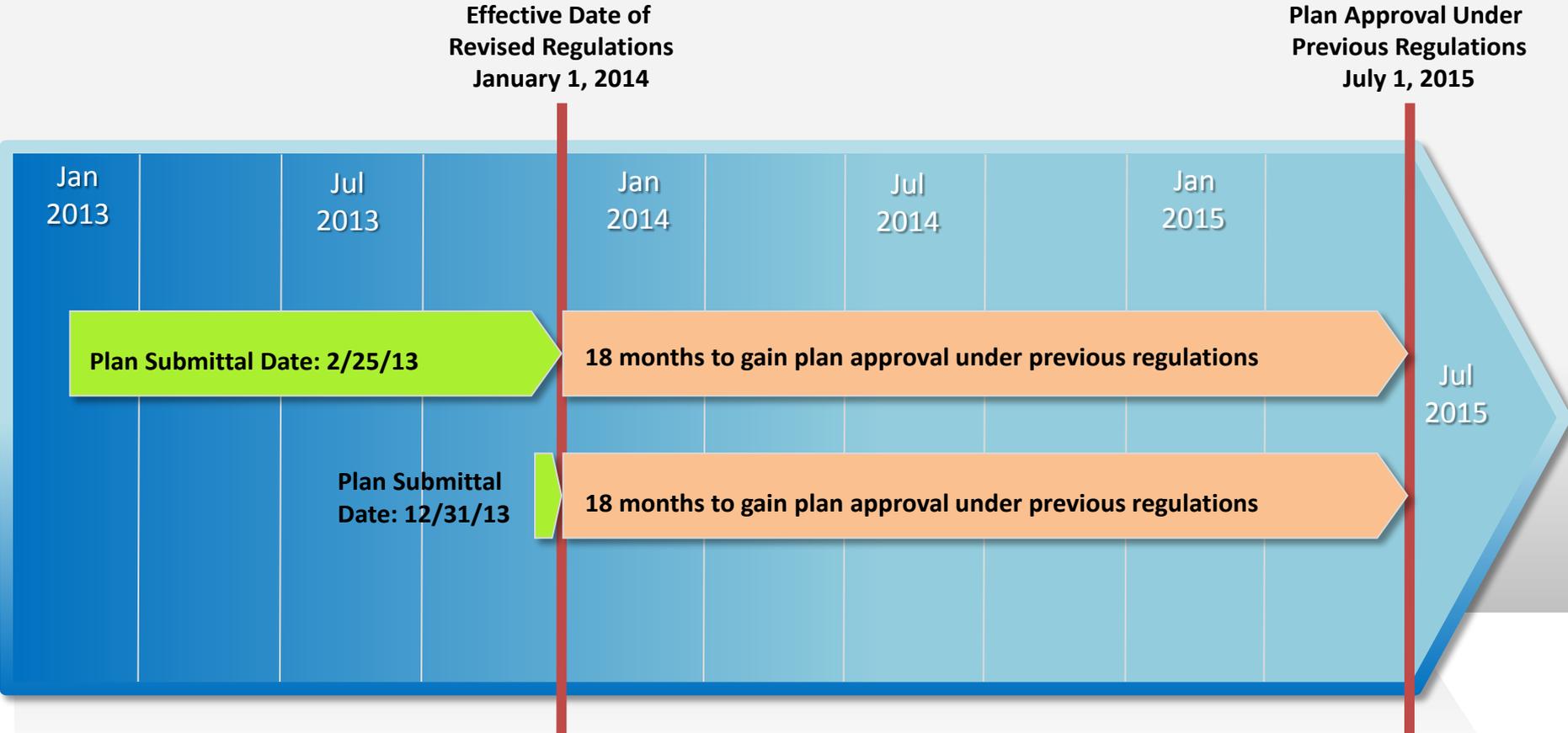
Interim Guidance Document

- Grandfathering Determination
 - by Delegated Agency
- Design Review
- Approval Extensions
 - Including phased plans
- Plan revisions

Grandfathering – Design Review

- Eighteen months from effective date to gain approval
 - In Regulatory language (3.5.6)

Projects Under Design Review When Revised *Regulations* Become Effective



Plan submittal meets approval agency grandfathering determination criteria as defined in:
Interim Guidance Policy – March 2013

Figure 1

Grandfathering – Approval Extensions

- Approved plan can be extended in 3-year approval periods
- Construction commences
 - Unlimited 3-year extensions
- Construction does not commence
 - Construction must commence within **6 years** of effective date otherwise plan expires

Commencement of Construction

- Utilities
- Roadways
- Stormwater management facilities
- General earthmoving alone does not qualify



Plans Approved to Comply with Previous Regulations

(Regulations in Place Prior to Revisions)

Effective Date of Revised Regulations
January 1, 2014

Commencement of Construction
no later than January 1, 2020
otherwise, plan approval expires



 Construction ongoing

 No commencement of construction

Figure 2

Extensions to Expired Plans



Second Chance

- Construction or not
- Owner may resubmit plan for re-approval prior to January 1, 2014
- Delegated Agencies should notify owners

Phased Sites Approvals

- Approved phases can be extended
 - Some portion of the project must commence construction
- Unapproved phases cannot be extended

Grandfathering – Plan Revisions

- Minor revisions
 - Comply with previous regs
- Major revisions
 - Change to Record Plan
 - MAY be required to comply with revised regs

The background of the slide is a close-up photograph of water with numerous ripples, creating a textured, blue-toned surface. The ripples are concentric circles of varying sizes, suggesting raindrops falling into a pool of water. The lighting is soft, highlighting the peaks and troughs of the ripples.

Compliance Criteria

New Development

Current Regulations

- **4 Regulatory Storm Events**
 - **Water Quality (2" rainfall)**
 - **2-Year**
 - **10-Year**
 - **100-Year**

Revised Regulations

- **3 Regulatory Storm Events**
 - **Resource Protection Event**
 - **1-year**
 - **Conveyance Event**
 - **10-year**
 - **Flooding Event**
 - **100-year**

Quality: Current Regulations

- 2" Rainfall event
- Preferential hierarchy based on Green Technology BMPs and extended detention
- 80% TSS reduction goal



Quality: Revised Regulations

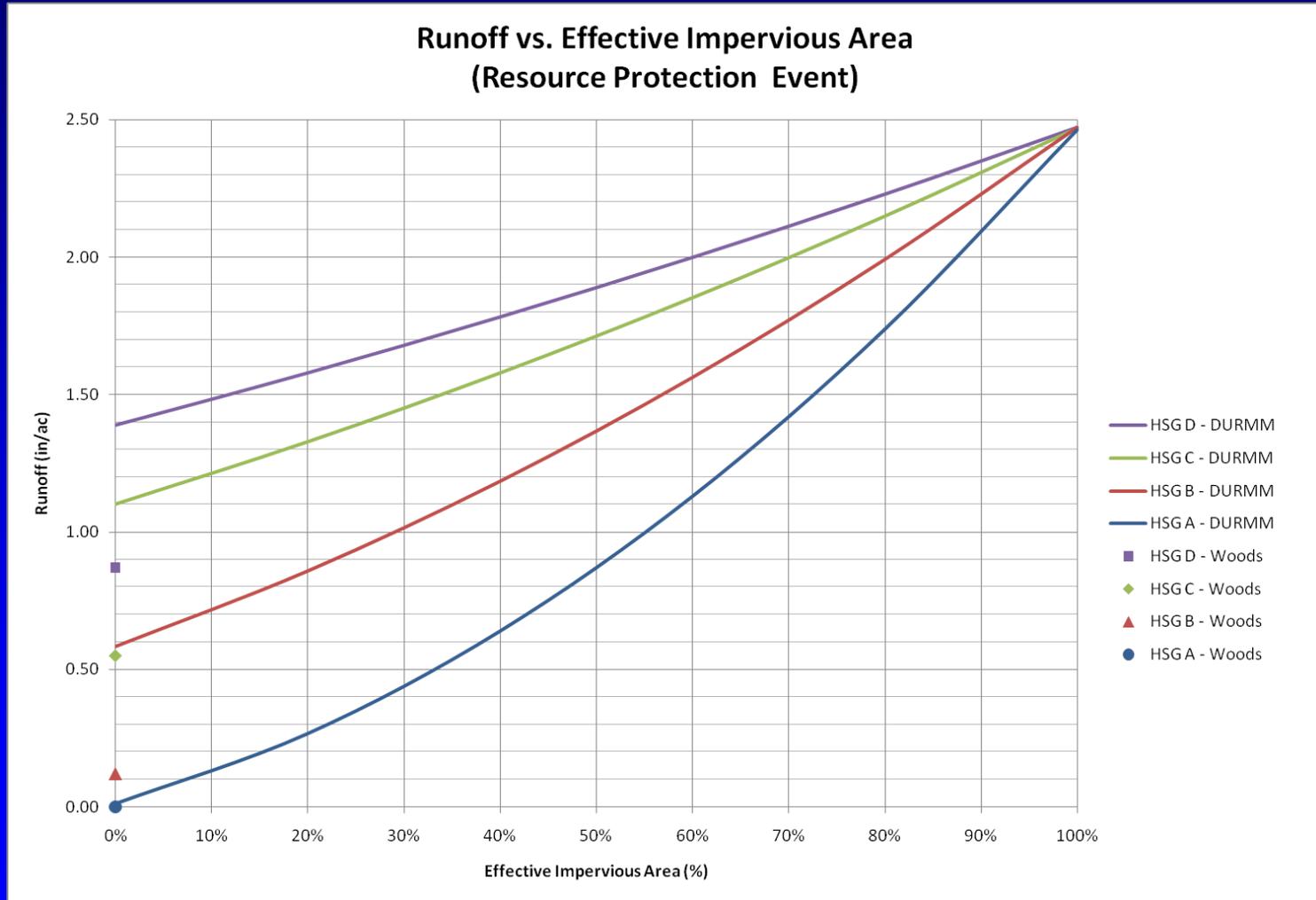
- 1-YR Storm event (~2.7" rainfall)
- Optimize for runoff reduction



Resource Protection Event Criteria

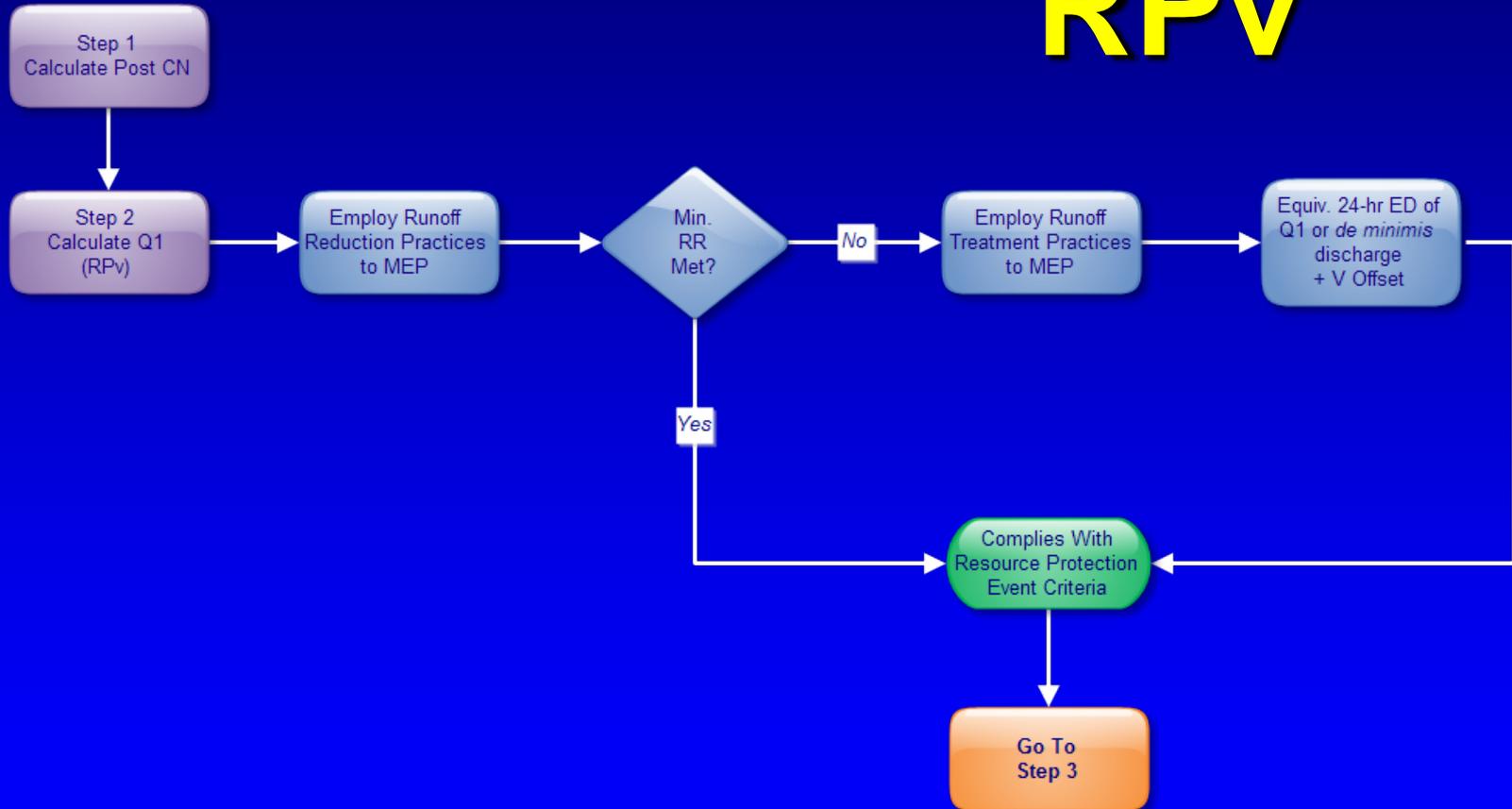
- Regs Section 5.2.3
- Pre wooded or meadow condition
 - Post equivalent wooded condition
- Remaining disturbed areas
 - Achieve 0% effective impervious

0% Effective Imperviousness



Resource Protection Event Compliance

RPv



RPv Compliance

- BMP designs based on Standards and Specifications
- Use DURMMv2 to verify runoff reduction goal has been met
- DURMMv2 is not a BMP sizing tool

Quantity: Current Regulations

- 2-YR, 10-YR, 100-YR (above C&D Canal)
- Analyze pre and post conditions
- Match post peak discharge to pre peak discharge
- Same management strategy for all sites

Quantity: Revised Regulations

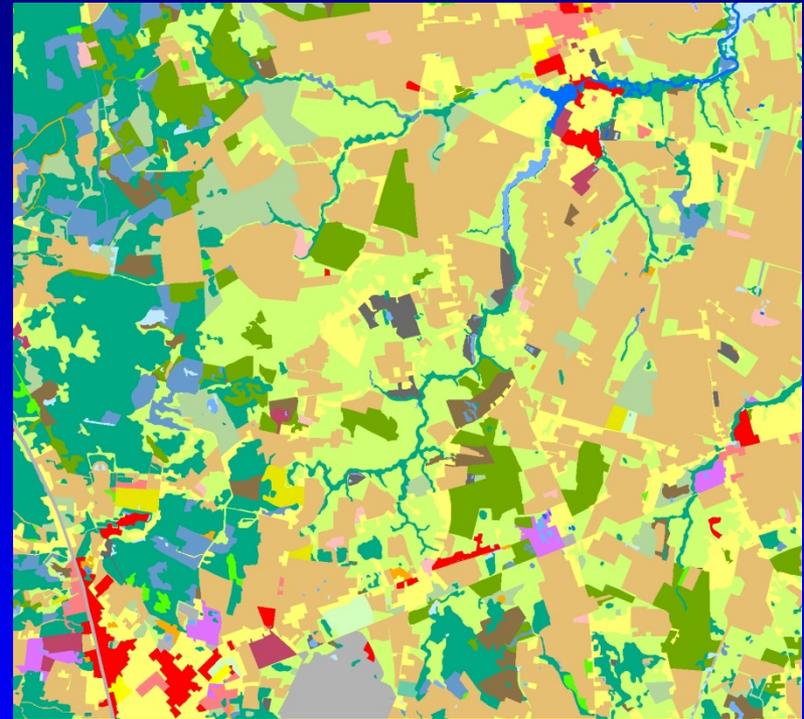
- 10-YR, 100-YR (State-wide)
- Analyze post condition only
- Optimize for “no adverse impact”

Quantity Management Strategy Options

- Based on:
 - Stormwater Assessment Study results
 - Location within watershed
- Options:
 - Standards-based approach
 - Performance-based approach

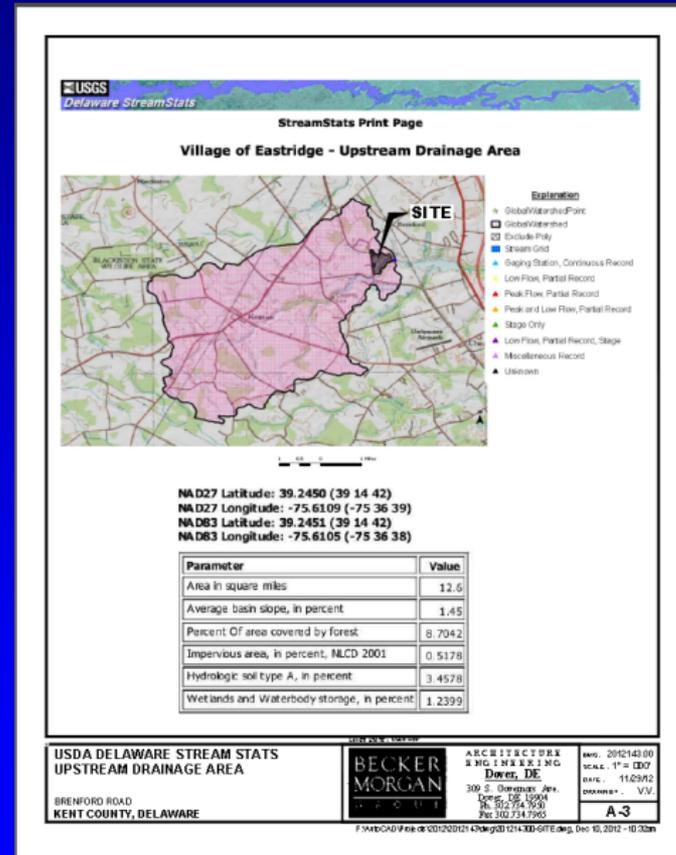
Standards-Based Approach

- Unit Discharge
 - cfs/acre
- Available only to projects with “Minor” SAS ratings
- Simple, straightforward, conservative



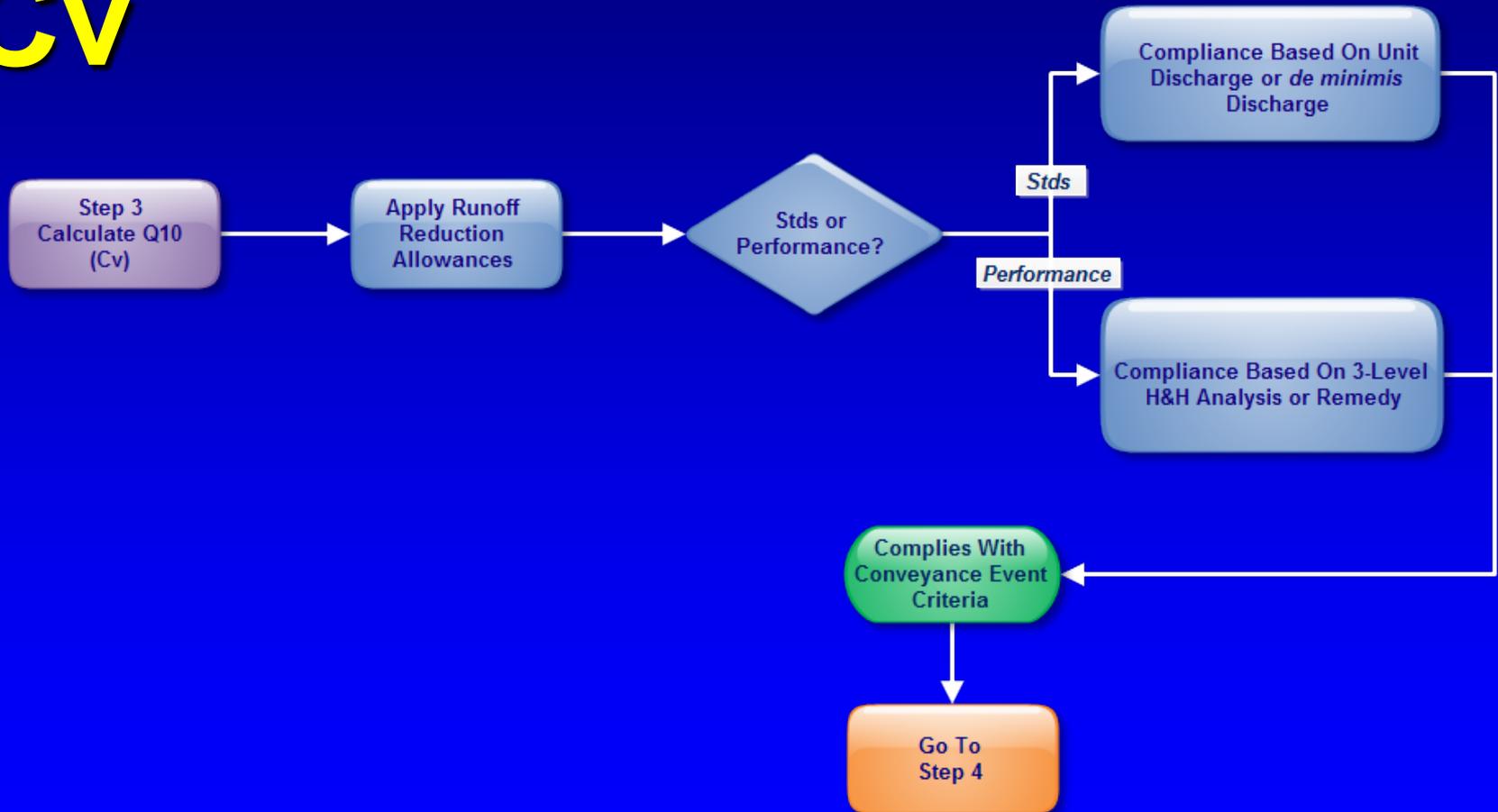
Performance-Based Approach

- Criteria based on:
 - hydrograph timing
 - channel stability
 - system capacity
- H&H analysis required
 - 3 levels of increasing detail
 - “No Adverse Impact”



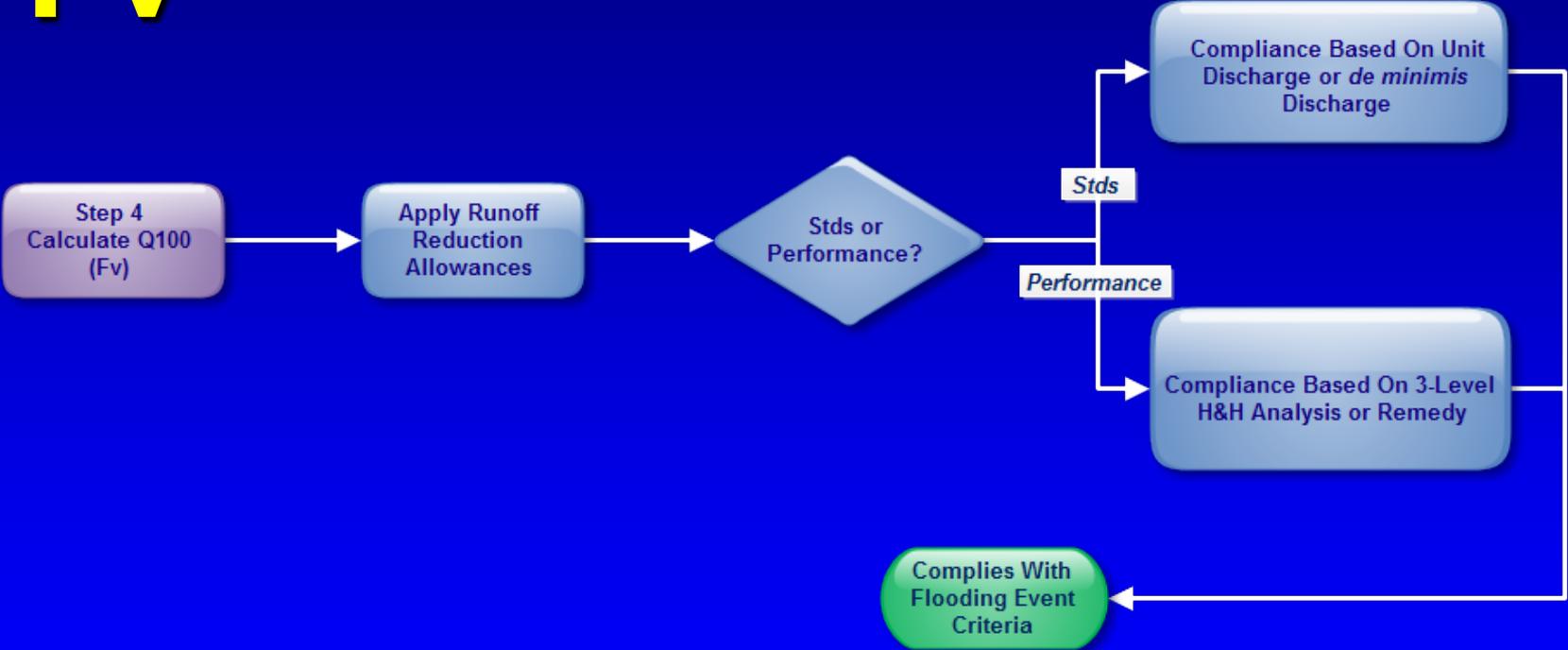
Conveyance Event Compliance

Cv



Flooding Event Compliance

Fv



An aerial photograph of an urban area, likely a brownfield site, showing a river winding through the center. The surrounding area is densely packed with buildings, parking lots, and infrastructure. A large, curved road or highway is visible on the left side. The overall scene suggests a complex urban environment undergoing redevelopment.

Compliance Criteria

Redevelopment
and Brownfields

Redevelopment

- Section 5.6 in Regs
- Intent is to encourage redevelopment
- Brownfields – remediation plan may meet stormwater goals



Redevelopment Criteria

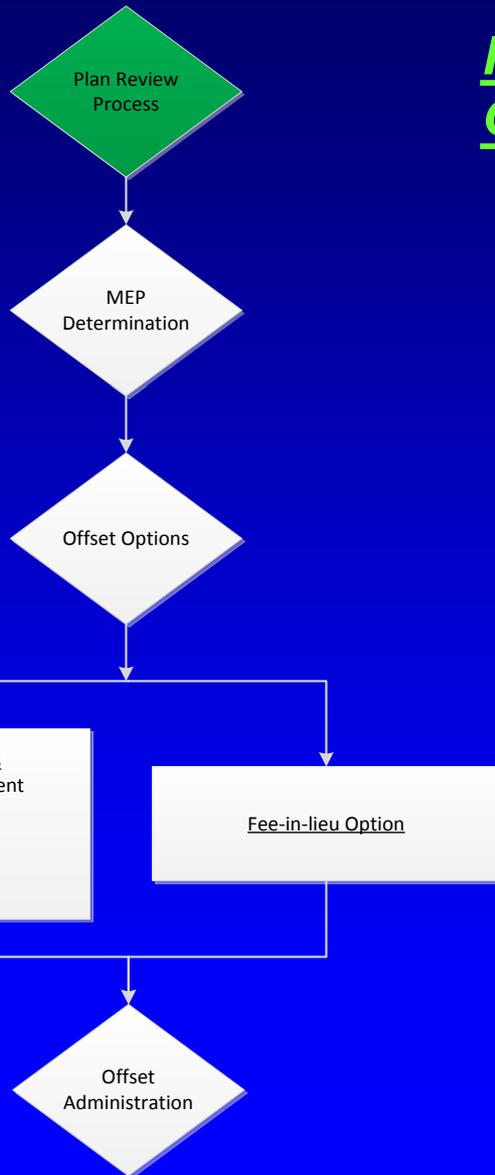
- Resource Protection Event
 - Previously developed areas within LOD
 - 30% reduction in effective imperviousness
 - Previously undeveloped areas within LOD
 - Full runoff reduction requirements
- Conveyance and Flooding Events
 - Full compliance

Offsets

Technical Document

Article 2.04 Offsets & Mitigation

Offset Process



Plan Review Process Indicates Site May Qualify for Offset

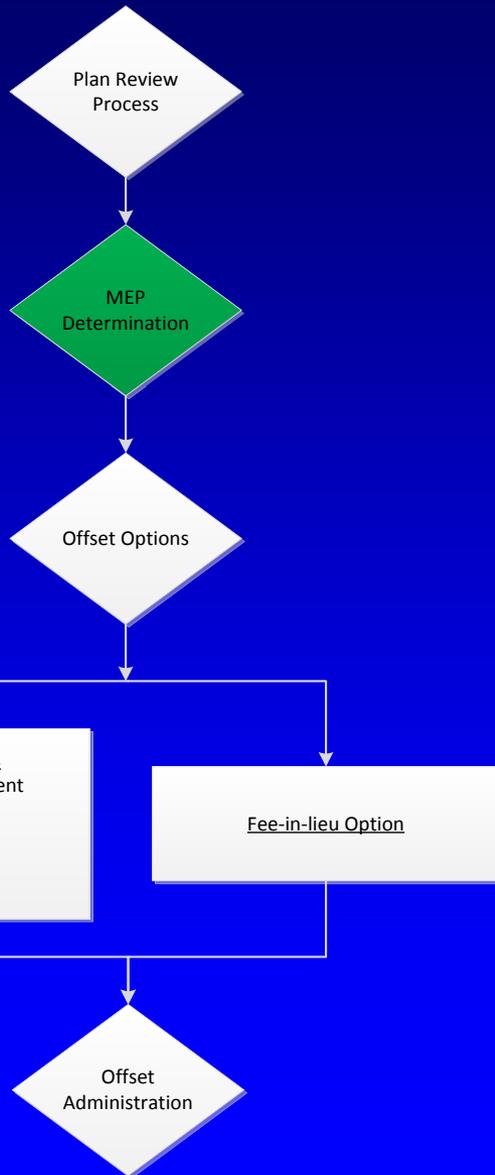
- Stormwater Assessment Report (SAR) contains multiple “Significant” ratings
- Analysis indicates on-site compliance may be an inferior solution
- Preliminary Sediment & Stormwater Plan (H&H study) indicates on-site compliance costs may exceed Maximum Extent Practicable (MEP)

“Maximum Extent Practicable”

- SWM measures, techniques, methods
 - Available and capable of being implemented
 - Considering
 - Cost
 - Available Technology
 - Project site constraints

*Ref: Proposed revisions to the Delaware Sediment & Stormwater Regulations
Sect 2.0 Definitions*

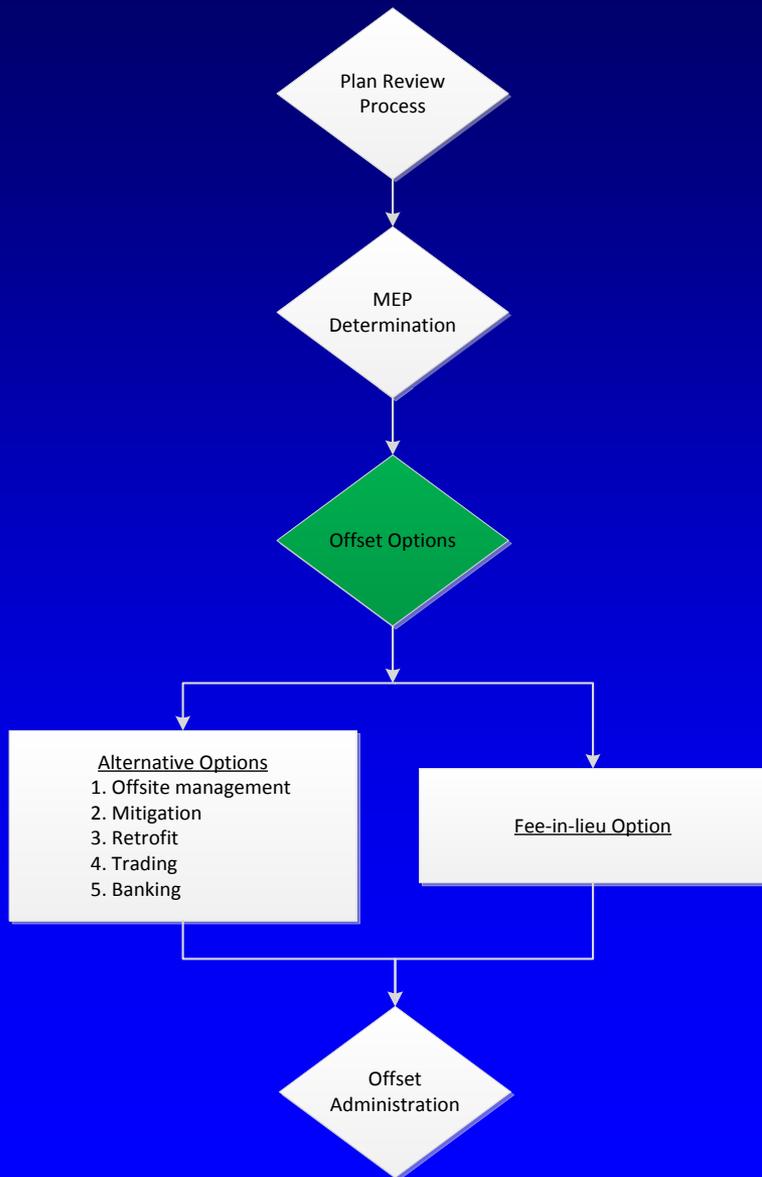
Offset Process



MEP Determination

MEP defined as estimated construction costs to meet R_{Pv} volume reduction requirements **> \$10/cu. ft.**

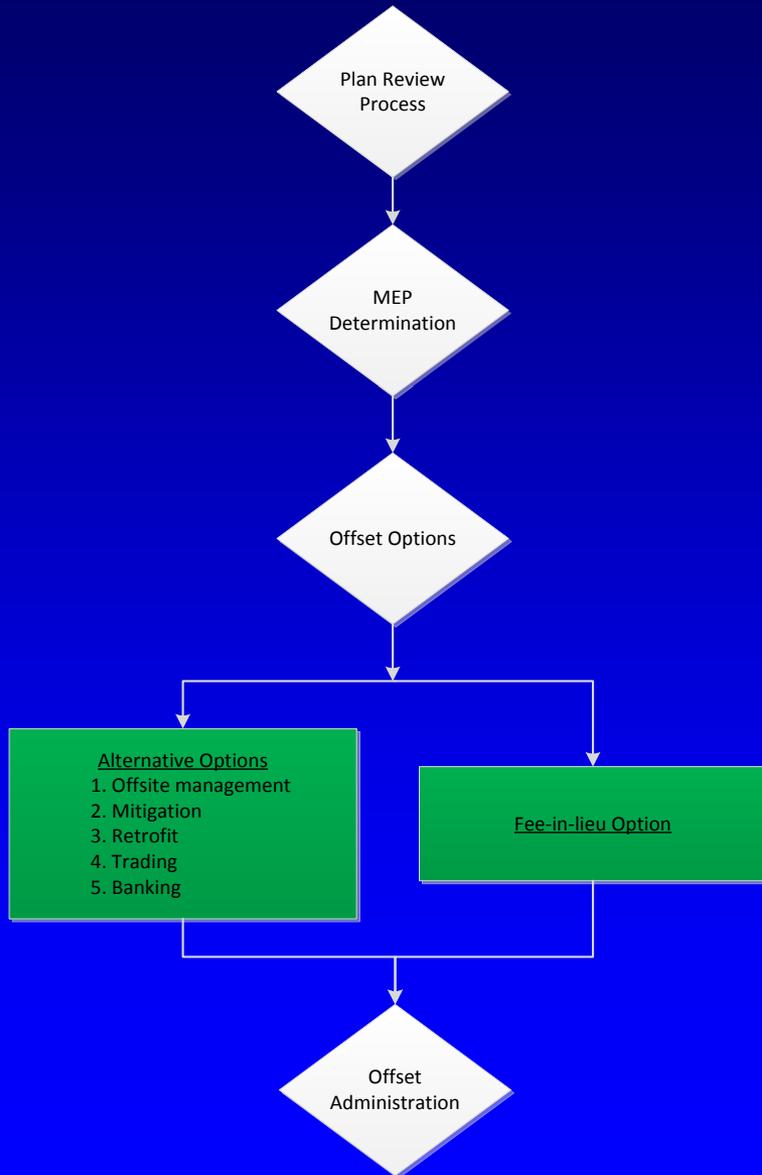
Offset Process



Offset Options

- Applicant proposes offset option

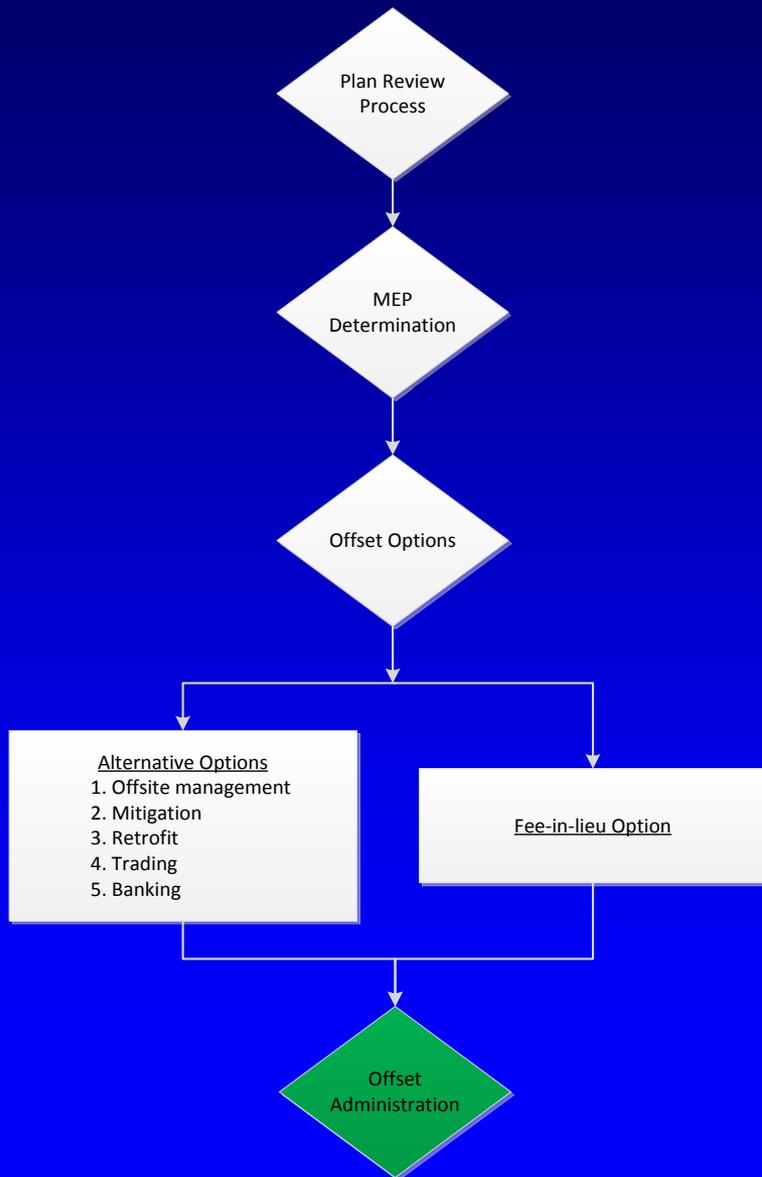
Offset Process



DNREC Fee-in-Lieu Option

- Use cu.ft. of runoff as “common currency”
- Alternative practices may be considered using an “exchange rate” with the “common currency”
- Based on **\$18/cu.ft.**
- Collect fee-in-lieu prior to start of construction as default for all offset options and then refund the fee when an alternative option is implemented within a prescribed time frame

Offset Process



Offset Administration

- Initially DNREC/CWAC function

Overall Objectives for Fee-In-Lieu

- Mitigate negative impacts of urban runoff at the watershed level
- Fee use prioritized based on benefit at the watershed level

Potential Uses of Fee-In-Lieu



- Implement recommendations of Watershed Management Plans
- Stormwater BMP retrofit projects
- Stream restoration projects
- Regional facilities
- Volume management from other sources
- Others????